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February 7, 1997

By Hand Delivery

EX PARTE OR LATE FILED

William Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Re: **EX PARTE PRESENTATION**

IB Docket No. 95-91

GEN Docket No. 90-357

Dear Mr. Caton:

Digital Satellite Broadcasting Corporation ("DSBC"), through its counsel, submits the attached response prepared by Melvin Barmat, a principal of Jansky/Barmat Telecommunications, Inc., to the recent *ex parte* submission of the Consumer Electronic Manufacturers Association ("CEMA").

As Mr. Barmat's response demonstrates, significant flaws and omissions in the CEMA submission make it "not only unreliable, but also clearly wrong." The Commission should thus place no credence in this extremely late-filed report.

Please associate this filing with the above-referenced dockets. Should you have any questions regarding this filing, please contact either of the undersigned. Ms. Hinson can be reached at (202) 887-8745 and Ms. Tritt can be reached at (202) 887-1510.

Very truly yours,



Diane S. Hinson



Cheryl A. Tritt

Counsel for Digital Satellite
Broadcasting Corporation

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Statement of Melvin Barmat

On January 30, 1997 the Consumer Electronics Manufacturer's Association ("CEMA") submitted a report to the Commission setting forth CEMA's "field test results on DAR systems." Based on its report, CEMA staff concluded in a three-page summary, also submitted to the Commission on January 30, 1997, that the Commission should immediately consider other spectrum options for DARS such as L-Band, UHF or VHF. Due to substantial flaws and omissions in CEMA's testing, however, CEMA's conclusions are not only unreliable, but also clearly wrong. Although CEMA's report is seriously flawed in many respects, I address here only the most egregious examples of the report's errors and omissions:

1. *CEMA's field tests employed an inappropriate satellite system.* CEMA reached its conclusion that S-Band is unacceptable for DARS use by using a satellite-based system that was designed in a university/government setting to be a low-cost, proof-of-principal illustration for the DARS concept. The system relied upon by CEMA used existing in-orbit space segment resources designed for a wholly different service -- the tracking and data relay satellite service. Most important, the system, as tested, did not include any techniques to mitigate the well-known blockage issues¹ associated with DARS. The DARS applicants fully appreciate the blockage/impairment problem and have proposed several alternative approaches that will successfully overcome this problem including terrestrial gap fillers,

¹ See NASA Reference Publication 1274, "Propagation Effects for Land Mobile Satellite Systems," Feb. 1992.

spacecraft diversity, receiver antenna diversity, large propagation margins and rake receivers. Accordingly, the CEMA tests did not demonstrate that S-band could not be used for DARS.

2. *CEMA's report fails to adequately describe the overall system aspects of its field tests.* Fundamental test set-up information such as the location of the transmitters relative to the various routes, the power level of the transmitters, the gain patterns of the receiving antennas and the location of the antennas on the measurement van were not, among other important factors, provided in the report. The absence of this critical information makes it impossible to perform an informed evaluation of the test results and thus there is no way the Commission can rely on this test report or its summary.

3. *CEMA's report fails to adequately interpret the data obtained in the field tests.* Merely tallying the minutes or miles of good or bad reception is far too simplistic a unitary criterion to evaluate the performance of a DARS system. Glaringly absent from CEMA's report are measurements of the system's relative performance at various distances from the terrestrial transmitter, in tunnels, when shadowed by buildings, when shadowed by trees, and so on. In addition, no attempt was made to evaluate the effectiveness of the satellite-based system when augmented by one of the terrestrial systems (such as a "gap filler"), which is surely a logical next step in the analysis. The absence of this type of evaluation renders the CEMA report useless in considering the appropriateness of S-Band for DARS.

4. *CEMA's conclusion that L-Band, UHF or VHF frequencies are better suited for DARS is wholly unsupported by its report.* Frequencies in all of these bands were evaluated, discussed, argued and discarded by the United States before it decided, more than five years ago, prior to the 1992 WARC, that 2310-2360 MHz was suitable spectrum for DARS

operation. CEMA provides no support whatsoever for its conclusion that there are L-Band, UHF or VHF frequencies now available for DARS. In fact, the record and recent events indicate exactly the opposite. CEMA's bare assertions should not be allowed to circumvent more than six years of hard work in developing a feasible DARS system in S-Band.

For all of these reasons, as well as the reasons set forth in the submissions of CD Radio, Inc. and Primosphere Limited Partnership, CEMA's report must be disregarded and its conclusions rejected.

Dated: February 7, 1997

A handwritten signature in black ink, appearing to read "Melvin Barmat", is written over a horizontal line.

Melvin Barmat
Jansky/Barmat Telecommunications, Inc.